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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/808,732	03/14/2001	Richard F. Hammen	A-69071/RFT	5501

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EXAMINER

THERKORN, ERNEST G.

ART UNIT PAPER NUMBER

1723

DATE MAILED: 08/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/808,732	Applicant(s) HAMMEN ET AL.	
	Examiner Ernest G. Therkorn	Art Unit 1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on July 21, 2004 & August 5, 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 6, 7, 12 and 28-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 6, 7, 12 and 28-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Applicant is advised that should claim 7 be found allowable, claim 28 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof.

When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claims 35 and 36 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. No support can be found for claims 35 and 36's pore size. Page 14, lines 15-18 of the specification does not appear to be directed to pores.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 29, and 30 are rejected under 35 U.S.C. 102(B) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092). The claims are considered to read on each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092). However, if a difference exists between the claims and each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092), it would reside in optimizing the elements of each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092). It would have been obvious to optimize the elements of each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092) to enhance separation.

Claims 1, 29, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092) in view of Betz (U.S. Patent No. 5,653,875). At best, the claims differ from each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092) in reciting the network is permeable. Betz (U.S. Patent No. 5,653,875) (column 16, lines 16-23 and 30-37) discloses that a polysiloxane network coating is permeable to allow access to the particles. It would have been obvious that each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092) is permeable because Betz (U.S. Patent No. 5,653,875) (column 16, lines 16-23 and 30-37) discloses that a polysiloxane network coating is permeable to allow access to the particles.

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Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) alone or each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092) in view of Betz (U.S. Patent No. 5,653,875) as applied to claims 1, 29, and 30 above, and further in view of Frechet (U.S. Patent No. 5,334,310) and Biebricher (U.S. Patent No. 4,177,038). At best, the claim differs from either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) alone or each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092) in view of Betz (U.S. Patent No. 5,653,875) in implying use of a functional group and reciting use of a tether. Frechet (U.S. Patent No. 5,334,310) (column 7, lines 35-64) discloses that functional groups are essential for ion exchange chromatography, hydrophobic interaction, and reversed phase chromatography and allow use of affinants specific for a single compound. Biebricher (U.S. Patent No. 4,177,038) (column 1, lines 34-40) discloses use of a spacer overcomes steric interference. It would have been obvious to use a functional group in either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) alone or each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092) in view of Betz (U.S. Patent No. 5,653,875) because Frechet (U.S. Patent No. 5,334,310) (column 7, lines 35-64) discloses that functional groups are essential for ion exchange chromatography, hydrophobic interaction, and reversed phase chromatography and allow use of affinants specific for a single compound. It would have been obvious to use a spacer in either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092)

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alone or each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092) in view of Betz (U.S. Patent No. 5,653,875) and Frechet (U.S. Patent No. 5,334,310) because Biebricher (U.S. Patent No. 4,177,038) (column 1, lines 34-40) discloses use of a spacer overcomes steric interference.

Claims 7 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) alone or each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092) in view of Betz (U.S. Patent No. 5,653,875) as applied to claims 1, 29, and 30 above, and further in view of Frechet (U.S. Patent No. 5,334,310) and Snyder, Introduction to Modern Liquid Chromatography, 1979, 276-279. At best, the claims differ from either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) alone or each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092) in view of Betz (U.S. Patent No. 5,653,875) in implying use of a functional group and reciting use of a blocking agent. Frechet (U.S. Patent No. 5,334,310) (column 7, lines 35-64) discloses that functional groups are essential for ion exchange chromatography, hydrophobic interaction, and reversed phase chromatography and allow use of affiants specific for a single compound. Snyder, Introduction to Modern Liquid Chromatography, 1979, 276-279 discloses "capping" ensures optimum surface coverage by organic groups. It would have been obvious to use a functional group in either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) alone or each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092) in view of Betz (U.S. Patent No. 5,653,875) because

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Frechet (U.S. Patent No. 5,334,310) (column 7, lines 35-64) discloses that functional groups are essential for ion exchange chromatography, hydrophobic interaction, and reversed phase chromatography and allow use of affinants specific for a single compound. It would have been obvious to use a spacer in either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) alone or each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092) in view of Betz (U.S. Patent No. 5,653,875) and Frechet (U.S. Patent No. 5,334,310) because Snyder, Introduction to Modern Liquid Chromatography, 1979, 276-279 discloses "capping" ensures optimum surface coverage by organic groups.

Claims 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) alone or each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092) in view of Betz (U.S. Patent No. 5,653,875) as applied to claims 1, 29, and 30 above, and further in view of Frechet (U.S. Patent No. 5,334,310). At best, the claims differ from either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) alone or each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092) in view of Betz (U.S. Patent No. 5,653,875) in reciting use of a functional group. Frechet (U.S. Patent No. 5,334,310) (column 7, lines 35-64) discloses that functional groups are essential for ion exchange chromatography, hydrophobic interaction, and reversed phase chromatography and allow use of affinants specific for a single compound. It would have been obvious to use a functional group in either Good

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(U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) alone or each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092) in view of Betz (U.S. Patent No. 5,653,875) because Frechet (U.S. Patent No. 5,334,310) (column 7, lines 35-64) discloses that functional groups are essential for ion exchange chromatography, hydrophobic interaction, and reversed phase chromatography and allow use of affinants specific for a single compound.

Claims 12 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) alone or each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092) in view of Betz (U.S. Patent No. 5,653,875) in view of Frechet (U.S. Patent No. 5,334,310) as applied to claims 31-33 above, and further in view of Larson (U.S. Patent No. 5,723,601). At best, the claims differ from either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) alone or each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092) in view of Betz (U.S. Patent No. 5,653,875) in view of Frechet (U.S. Patent No. 5,334,310) in reciting use of an enzyme. Larson (U.S. Patent No. 5,723,601) (column 1, lines 25-28, column 2, lines 47-50, column 4, lines 2-16) discloses that enzymes are desirable functional groups for continuous beds. It would have been obvious to use an enzyme in either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) alone or each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092) in view of Betz (U.S. Patent No. 5,653,875) in view of Frechet (U.S. Patent No. 5,334,310) because Larson (U.S. Patent No. 5,723,601) (column 1, lines 25-28, column 2,

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lines 47-50, column 4, lines 2-16) discloses that enzymes are desirable functional groups for continuous beds.

Claims 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) alone or each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092) in view of Betz (U.S. Patent No. 5,653,875) as applied to claims 1, 29, and 30 above, and further in view of Frechet (U.S. Patent No. 5,334,310). At best, the claims differ from each of either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) alone or each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092) in view of Betz (U.S. Patent No. 5,653,875) in reciting use of pores greater than 100 nanometers. Frechet (U.S. Patent No. 5,334,310) (column 4, lines 54-68) discloses that large pores greater than 600 nanometers reduce backpressure. It would have been obvious to use pores greater than 100 nanometers in each of either Good (U.S. Patent No. 3,808,125) or Fuller (U.S. Patent No. 3,878,092) alone or each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092) in view of Betz (U.S. Patent No. 5,653,875) because Frechet (U.S. Patent No. 5,334,310) (column 4, lines 54-68) discloses that large pores greater than 600 nanometers reduce backpressure.

The remarks urge patentability based upon interstices. However, interstices are disclosed in Fuller (U.S. Patent No. 3,878,092) on column 7, lines 66-67 and Good (U.S. Patent No. 3,808,125) on column 6, line 40. The interstices are shown in each of Good (U.S. Patent No. 3,808,125) and Fuller

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(U.S. Patent No. 3,878,092) Figures 3, 4, 5, and 6 as element 30. Accordingly, the claims are considered to read on each of Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092).

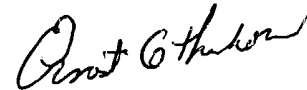
The remarks urge patentability based upon the limitation that the polymer network is permeable to fluids. However, Fuller (U.S. Patent No. 3,878,092) on column 2, lines 40 and 57, column 5, line 3, and column 7, lines 66-67 discloses that his film is highly porous and Good (U.S. Patent No. 3,808,125) on column 6, lines 40 disclose his medium is porous. Accordingly, Good (U.S. Patent No. 3,808,125) and Fuller (U.S. Patent No. 3,878,092) are considered to be permeable.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication should be directed to E. Therkorn at telephone number (571) 272-1149. The official fax number is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ernest G. Therkorn
Primary Examiner
Art Unit 1723

EGT
August 17, 2004